

STUDIES IN THE EUPATORIEAE (ASTERACEAE). LXXXVIII.

ADDITIONS TO THE GENUS, AGERATUM

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A recent monographic study of the genus Ageratum (Johnson, 1971) has recognized 29 species with 2 sub-species and 14 forms in America. In the study, Ageratum was characterized as having a conical receptacle and a coroniform to squamose pappus among other characters and species placed in Alomia were not included. Our own studies show that the existing generic separation between Ageratum and Alomia is unnatural and a number of species of the latter must be returned or transferred to Ageratum. One recently discovered undescribed species is also added.

Species transferred here to Ageratum from Alomia lack any pappus structure but agree with Ageratum by having conical receptacles, strongly indurated phyllaries, prominent sunken capitate glands on the leaves and strong annulate thickenings in the cells of the anther collars. Typical Alomia differs in all these characters and also has a unique form of short setae on the achene. The somewhat broadened concept of Ageratum includes some variation of style branch and carpopodial structure. The style branches are usually strongly and densely papillose but show only slight papillosity in A. ballotaefolium of Venezuela. The carpopodia are usually enlarged and strongly asymmetrical with thin walled cells and a poorly defined foramen but the structure is nearly vestigial in one Mexican species, A. stachyofolium, and nearly symmetrical in one Brazilian species, A. glomeratum. Not included here in Ageratum are some possibly related species having flat receptacles such as Alomia cordata Blake which we place in Blakeanthus and Alomia longifolia (Gardner) B.L. Robinson which we place in Acritopappus.

We would exclude one of the species included in the monograph by Johnson, Ageratum domingense Spreng. The species has been placed in the West Indian genus Phania by some authors. Phania is closely related to Ageratum, having the same type of glandular punctate leaves and the same type of conical receptacle. Phania differs by the reduced anther appendages,

shorter campanulate flowers, the short anther filaments consisting almost entirely of collars, and large laciniate oblong pappus squamae with strongly sinuose-walled cells. The Sprengel species agrees with Phania in all the significant features, but the anther appendage, while short, is large enough to see with a handlens.

From descriptions it would seem that the characteristic glandular punctations on the leaves of Ageratum are often overlooked. These are usually flush with the surface or even depressed. The cells of the glands are large but usually collapsed. The glands are sometimes hidden under other pubescence or concolorous with surrounding leaf surface but they are present on every specimen we have examined.

We would presently recognize the following 41 species in Ageratum based on the work of Johnson and on our own investigations. Some other species formerly placed in Alomia may prove to be Ageratum but material has not been seen. The species preceded by an asterisk are not included in the genus by Johnson.

Ageratum albidum (A.P.Decandolle) Hemsl., Biol. Cent. Amer., Bot. 2: 81. 1881. Mexico.

* Ageratum ballotaefolium (Maguire, Steyermark & Wurdack) R.M.King & H.Robinson, comb. nov. Alomia ballotaefolium Maguire, Steyermark & Wurdack, Mem. N.Y. Bot. Gard. 9: 425. 1957. Venezeula.

* Ageratum benjamin-lincolni R.M.King & H.Robinson, nom. nov. Alomia guatemalensis B.L.Robinson, Proc. Amer. Acad. 49: 448. 1913. Not Ageratum guatemalensis Johnson. Guatemala.

* Ageratum candidum G.M.Barroso, Sellowia 17: 83. 1965. Brazil.

* Ageratum chirquense (B.L.Robinson) R.M.King & H.Robinson, comb. nov. Alomia chiriquensis B.L.Robinson, Contr. Gray Herb. n.s. 61: 4. 1920. Panama.

Ageratum chortianum Standley & Steyermark, Publ. Field Mus. Nat. Hist., Bot. Ser. 23: 98. 1944. Guatemala, Honduras.

Ageratum conyzoides L. Sp. Pl. 2: 839. 1753. Mexico, Central America, West Indies, South America, Widely adventive.

Ageratum corymbosum Zuccag. ex Pers., Syn. 2: 420. 1807. Mexico, Guatemala, El Salvador, Honduras.

Ageratum echioides (Less.) Hemsl., Biol. Centr. Amer.,
Bot. 2: 81. 1881. Guatemala, Mexico.

Ageratum elassocarpum Blake, Contr. U.S. Nat. Herb.
22: 588. 1924. Mexico.

Ageratum ellipticum B.L.Robinson, Contr. Gray Herb.
n.s. 90: 5. 1930. British Honduras.

* Ageratum fastigiatum (Gardn.) R.M.King & H.Robinson,
comb. nov. Isocarpha fastigiata Gardn. in Hook.
Lond. Jour. Bot. 5: 495. 1846. Brazil.

Ageratum gaumeri B.L.Robinson, Proc. Amer. Acad. 47:
191. 1911. Guatemala, Mexico.

* Ageratum glomeratum Barroso & King, Brittonia 23:
121. 1971. Brazil.

Ageratum guatemalense M.F.Johnson, Ann. Missouri Bot.
Gard. 58: 64. 1971. Guatemala.

Ageratum houstonianum Miller, Gard. Dict. ed. 8. 1768.
Mexico, Central America, West Indies, Colombia,
Widely adventive.

* Ageratum isocarphoides (A.P.Decandolle) Hemsl.,
Biol. Cent. Amer. Bot. 2: 82. 1881. Mexico.

Ageratum littorale Gray, Proc. Amer. Acad. 16: 78.
1880. Florida, West Indies, British Honduras.

Ageratum lucidum B.L.Robinson, Proc. Amer. Acad. 36:
475. 1901. Mexico.

Ageratum maritimum H.B.K., Nov. Gen. et Sp. 4: 117.
1818. Ed. Fol. Greater Antilles, Mexico (Quintana
Roo).

* Ageratum microcarpum (Benth. ex Oersted) Hemsl.,
Biol. Cent. Amer., Bot. 2: 82. 1881. Costa Rica,
Honduras, Nicaragua.

* Ageratum microcephalum Hemsl., Biol. Cent. Amer.,
2: 82. 1881. Mexico.

* Ageratum micropappum Baker, Mart. Fl. Bras. 6(2):
198. 1876. Brazil.

- * Ageratum myriadenium (Schultz-Bip. ex Baker) R.M. King & H. Robinson, comb. nov. Alomia myriadenia Schultz-Bip. ex Baker, Mart. Fl. Bras. 6(2): 192. 1876. Brazil.
- Ageratum nelsonii (B.L. Robinson) M.F. Johnson, Ann. Missouri Bot. Gard. 58: 42. 1971. Mexico.
- Ageratum oerstedii B.L. Robinson, Contr. Gray Herb. n. s. 42: 472. 1913. Costa Rica.
- Ageratum paleaceum (A.P. Decandolle) Hemsl., Biol. Cent. Amer., Bot. 2: 83. 1881. Mexico.
- Ageratum peckii B.L. Robinson, Proc. Amer. Acad. 47: 192. 1911. British Honduras.
- Ageratum perplexans M.F. Johnson, Ann. Missouri Bot. Gard. 58: 80. 1971. Bolivia.
- Ageratum petiolatum (Hook. & Arn.) Hemsl., Biol. Cent. Amer., Bot. 2: 83. 1881. Costa Rica, Nicaragua, Panama.
- * Ageratum pinetorum (L.O. Williams) R.M. King & H. Robinson, comb. nov. Alomia pinetorum L.O. Williams, Fieldiana, Bot. 31: 25. 1964. Honduras.
- * Ageratum platylepis (B.L. Robinson) R.M. King & H. Robinson, comb. nov. Alomia platylepis B.L. Robinson, Proc. Amer. Acad. 49: 448. 1913. Guatemala.
- Ageratum platypodium B.L. Robinson, Contr. Gray Herb. n. s. 42: 464. 1913. Mexico.
- Ageratum radicans B.L. Robinson, Proc. Amer. Acad. 47: 192. 1911. British Honduras.
- * Ageratum reedii R.M. King & H. Robinson, sp. nov.
Suffrutices erecti multo ramosi. Caules teretes parce puberuli. Folia plerumque opposita superiore alterna distincte petiolata, petiolis 0.7-2.0 cm longis, laminis ovatis 3-7 cm longis 2-5 cm latis acutis vel breviter acuminatis margine argute serratis base rotundatis vel per breviter cuneatis tri- vel quinquenerviatis supra atrovirentibus subtus pallidis dense glandulo-punctatis utrinque scabrellis. Inflorescentiae laxae cymosae, ramis longis valde ascendentibus, pedicellis ultimis congestis 1-11 mm longis dense puberulis. Capitula ca. 5 mm alta,

floribus ca. 125; involucri squamae ca. 40, eximbriatae subaequilongae 4-5 mm longae bi-tri-seriatae induratae, anguste lanceolatae extus tristriatae parce piliferae; receptacula conica ebractifera; corollae ca. 3 mm longae inferne breviter tubulares in medio leniter constrictis superne anguste infundibulares extus pauce piliferae; filamenta antherarum in parte superiore ca. 300 μ longa angusta; thecae ca. 1 mm longae, appendicibus non longioribus quam latoribus; appendices stylorum filiformes dense patente papilloso; achaenia glabra; carpodia subcylindrica nervis distincte excentricis, cellulis oblongis vel longioribus, parietibus incrassatis; pappi squamae 5 perbreves latoribus lobatis et denticulatis. Grana pollinis 15-17 μ diam.

Type: COSTA RICA: Monteverde, elevation 4500 ft. January 31, 1972. Walter James 14B (Holotype US!).

The new species is close to A. petiolatum (Hook. & Arn.) Hemsl. of Costa Rica and Nicaragua but the latter is more herbaceous with more compact more scapose inflorescences, upper leaves are opposite, leaf bases are more cuneate and glands on under surface are sunken into pits.

We take great pleasure in naming this new species for Dr. Clyde F. Reed of Baltimore, Maryland who very generously donated the type specimen to the United States National Herbarium.

Ageratum riparium B.L.Robinson, Contr. Gray Herb. n.s. 42: 473. 1913. Costa Rica, Panama.

Ageratum rugosum Coult., Bot. Gaz. 20: 42. 1895.
Mexico, Central America.

Ageratum scorpioideum Baker in Mart., Fl. Bras. 6(2): 197. 1876. Guayana.

Ageratum stachyofolium B.L.Robinson, Proc. Amer. Acad. 36: 476. 1901. Mexico.

Ageratum standleyi B.L.Robinson in Standley, Jour. Arnold Arbor. 11: 44. 1930. Honduras.

Ageratum tomentosum (Benth. ex Oerst.) Hemsl., Biol. Cent. Amer., Bot. 2: 82. 1881. Mexico, Costa Rica ?

Reference

- Johnson, M.F. 1971. A monograph of the genus Ageratum L. (Compositae-Eupatorieae). Ann. Missouri Bot. Gard. 58: 6-88.

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